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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/727,623	12/01/2000	Michael Hallinan	GB919990093US1	4188

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EXAMINER

LEZAK, ARRIENNE M

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 06/04/2004

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/727,623	HALLINAN ET AL.	
	Examiner	Art Unit	
	Arrienne M. Lezak	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 9 & 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Examiner finds the claim language to be unclear, particularly, "the dummy resources are replaced in the service request by the respective allocated resources for forwarding to the service provider". Examiner is unclear as to what Applicant intended to be forwarded to the service provider. Examiner notes that as written, Claims 9 & 19 could be interpreted several ways, and as such are rejected as being indefinite.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,151,688 to Wipfel in view of US Patent 5,764,626 to VanDervort.
5. Regarding Claims 1, 11, 21 and 24, Wipfel discloses a method, apparatus and computer-readable medium for allocating resources of a service provider to a plurality of users of the service provider in a data processing system wherein the resources are

maintained in a resource pool, (Abstract; Fig. 2 & 7; Col. 3, lines 41-62; and Col. 8, lines 7-67), when not allocated to a user and comprise a plurality of first and second resources, each second resource being associated with a first resource for use together with the associated first resource, and wherein, to invoke performance of a service by the service provider, a user issues a first resource request, requesting a first resource, one or more second resource requests, requesting one or more second resources, and, following receipt of the requested resources; issues a service request including the received first resource and at least one received second resource, requesting performance of the service, (Col. 8, lines 7-67; Col. 14, lines 61-65; Cols. 15 & 16), the method comprising steps of:

- dispensing resources to a user in response to the first and second resource requests, each resource representing a resource requested by the user, (Col. 8, lines 52-59 and Col. 15, lines 36-41); and
- in response to the service request from the user, allocating corresponding resources from the resource pool to the user, (Col. 8, lines 52-59 and Col. 15, lines 36-41).

6. Examiner notes that it would have been obvious to use connection and object handles for identification within a resource management/allocation system such as Wipfel. As said first and second resource requests represent connection and object handles, the issuing of first and second resource requests would have been obvious, (perhaps even inherent), in view of the teachings of Wipfel. Examiner further notes that

Wipfel discloses available methods and tools for mediating requests for sharable resources from a global pool which are well-known, including, but not limited to preventing deadlock, load-balancing, scheduling and cache management, (Col. 14, lines 61-65). Moreover, Wipfel teaches a global queue wherein resources are redistributed as needed, (Cols. 15 & 16).

7. Wipfel does not specifically teach the dispensing of dummy resource buffers that are later replaced by corresponding actual resources in response to service requests for the same. VanDervort discloses a resource management dummy test cell capable of being identified, modified, discarded or replaced, (Col. 18, lines 1-35). It would have been obvious to one of ordinary skill in the art at the time of invention by Applicant to apply the dummy node forwarding technique of VanDervort to the Wipfel resource management system. The motivation to combine is found in the common resource management capabilities taught by both Wipfel and VanDervort. Moreover, the addition of dummy node forwarding, (which has been well-known in the art for various purposes), would clearly provide for memory pre-allocation, which is an obvious performance advantage within a system, (like Wipfel), which already provides for the pre-allocation of resources, including memory buffers, (Col. 8, lines 7-67). Thus, Claims 1, 11, 21 and 24 are unpatentable in view of the combined teachings of Wipfel in view of VanDervort.

8. Regarding Claims 2 & 12, Wipfel in view of VanDervort is relied upon for those teachings disclosed herein. As noted above, Wipfel in view of VanDervort discloses a method, apparatus and computer-readable medium for allocating resources of a service

provider to a plurality of users of the service provider in a data processing system using a dummy node forwarding technique, wherein corresponding resources from the resource pool are allocated to dispensed dummy resources according to the best match between the set of resources represented by the dummy resources dispensed to the user and groups of associated first and second resources in the resource pool.

Examiner notes that it would have been obvious to dispense dummy, (and actual), resources, which best met the needs and capabilities of the user, as to do otherwise would defeat the purpose of a resource management system. Thus, Claims 2 & 12 are unpatentable in view of the combined teachings of Wipfel in view of VanDervort.

9. Regarding Claims 3 & 13, Wipfel in view of VanDervort is relied upon for those teachings disclosed herein. As noted above, Wipfel in view of VanDervort discloses a method, apparatus and computer-readable medium for allocating resources of a service provider to a plurality of users of the service provider in a data processing system using a dummy node forwarding technique, wherein in response to the first and second resource requests from a user, a resource is reserved, (scheduled), in the resource pool corresponding to each resource requested by the user, (Col. 8, lines 7-67; Col. 14, lines 61-65; and Cols. 15 & 16). Thus, Claims 3 & 13 are unpatentable in view of the combined teachings of Wipfel in view of VanDervort.

10. Regarding Claims 4, 5, 14 & 15, Wipfel in view of VanDervort is relied upon for those teachings disclosed herein. As noted above, Wipfel in view of VanDervort discloses a method, apparatus and computer-readable medium for allocating resources

of a service provider to a plurality of users of the service provider in a data processing system using a dummy node forwarding technique, wherein:

- in response to a first resource request from a user, determining whether the resource pool contains an unreserved first resource, if so reserving that first resource for the user, and if not obtaining a new first resource from the service provider, adding the new first resource to the resource pool and reserving that resource for the user;
- in response to a the second resource request from the user, determining whether a first group of resources, comprising the first resource reserved for the user and any second resources associated with that first resource in the resource pool, contains an unreserved second resource corresponding to the resource requested in the second resource request, if so reserving that second resource for the user, and if not:
- determining whether the resource pool contains a second group of associated, unreserved first and second resources, which group comprises all the resources requested by the user, and if so reserving those resources in the second group for the user and removing the reservations on resources previously reserved for the user, (per pending Claims 4 & 14); and

- if it is determined that the resource pool does not contain the second group, the method includes obtaining from the service provider a new second resource, associated with the reserved first resource, corresponding to the resource requested in the second resource request, adding the new second resource to the resource pool and reserving that resource for the user, (per pending Claims 5 & 15).

11. Examiner notes that the requesting, load balancing, scheduling, (such as, but not limited to the transferring and interchanging of resource reservations), adding and removing of resources within a resource pool using a global queue, (and all obvious variations thereof) is disclosed herein above. Examiner further notes that it would have been obvious to reserve an available resource wherever located. Further, in the event that a resource was no longer needed, it would have been obvious to cancel a resource reservation. Thus, Claims 4, 5, 14 & 15 are unpatentable in view of the combined teachings of Wipfel in view of VanDervort.

12. Regarding Claims 6, 7, 16 & 17, Wipfel in view of VanDervort is relied upon for those teachings disclosed herein. As noted above, Wipfel in view of VanDervort discloses a method, apparatus and computer-readable medium for allocating resources of a service provider to a plurality of users of the service provider in a data processing system using a dummy node forwarding technique, wherein if it is determined that the resource pool does not contain the second group, the method includes determining whether:

- the resource pool contains a third group of associated first and second resources which includes all the resources requested by the user and in which one or more of the resources is reserved; and
- the first group of resources includes a resource corresponding to each reserved resource in the third group;
- if so, interchanging the reservations between the first and third groups and reserving for the user the resource in the third group corresponding to the resource requested in the second resource request, and if not obtaining from the service provider a new second resource, associated with the reserved first resource, corresponding to the resource requested in the second resource request, adding the new second resource to the resource pool and reserving that resource for the user, (per pending Claims 6 & 16); and
- if it is determined that the resource pool does not contain the second group: determining whether the resource pool contains a plurality of further groups of associated first and second resources, one or more of the further groups containing resources reserved for respective further users, such that the reservations for the users may be transferred between groups among the first and further groups to obtain a group which has one or more reservations for the user that issued the second resource request and which

- includes an unreserved second resource corresponding to the resource requested in the second resource request; and
- if so, transferring the reservations between the groups and reserving the unreserved second resource for the user that issued the second resource request;
- and if not obtaining from the service provider a new second resource, associated with the first resource reserved for that user, corresponding to the resource requested in the second resource request, adding the new second resource to the resource pool and reserving that resource for the user, (per pending Claims 7 & 17).

13. Examiner notes that the requesting, load balancing, scheduling, (such as, but not limited to the transferring and interchanging of resource reservations), adding and removing of resources within a resource pool using a global queue, (and all obvious variations thereof) is disclosed herein above. Examiner further notes that it would have been obvious to reserve an available resource wherever located. Further, in the event that a resource was no longer needed, it would have been obvious to cancel a resource reservation. Thus, Claims 6, 7, 16 & 17 are unpatentable in view of the combined teachings of Wipfel in view of VanDervort.

14. Regarding Claims 8 & 18, Wipfel in view of VanDervort is relied upon for those teachings disclosed herein. As noted above, Wipfel in view of VanDervort discloses a method, apparatus and computer-readable medium for allocating resources of a service provider to a plurality of users of the service provider in a data processing system using

a dummy node forwarding technique wherein in response to the service request from a user, allocating the resources reserved for the user to the corresponding dummy resources dispensed to the user. Examiner further notes that it would have been obvious to replace dummy resources with actual resources either automatically or upon request. Thus, Claims 8 & 18 are unpatentable in view of the combined teachings of Wipfel in view of VanDervort.

15. Regarding Claims 9 & 19, Wipfel in view of VanDervort is relied upon for those teachings disclosed herein. As noted above, Wipfel in view of VanDervort discloses a method, apparatus and computer-readable medium for allocating resources of a service provider to a plurality of users of the service provider in a data processing system using a dummy node forwarding technique wherein the dummy resources are replaced in the service request by the respective allocated resources for forwarding to the service provider. Examiner interprets this to mean that the service provider is informed of the dummy resource replacement for actual resource accounting purposes. Such accounting of resource distribution would have been obvious, perhaps even inherent within a resource management system. Thus, Claims 9 & 19 are unpatentable in view of the combined teachings of Wipfel in view of VanDervort.

16. Regarding Claims 10 & 20, Wipfel in view of VanDervort is relied upon for those teachings disclosed herein. As noted above, Wipfel in view of VanDervort discloses a method, apparatus and computer-readable medium for allocating resources of a service provider to a plurality of users of the service provider in a data processing system using a dummy node forwarding technique wherein the first resources obviously comprise

connection handles, each identifying a connection between the service provider and a user, and wherein the second resources obviously comprise object handles, each identifying an object to be used by the service provider in performance of a service for the associated connection. Thus, Claims 10 & 20 are unpatentable in view of the combined teachings of Wipfel in view of VanDervort.

17. Regarding Claims 22 & 23, Wipfel in view of VanDervort is relied upon for those teachings disclosed herein. As noted above, Wipfel in view of VanDervort discloses a method, apparatus and computer-readable medium for allocating resources of a service provider to a plurality of users of the service provider in a data processing system using a dummy node forwarding technique wherein the service provider could obviously be a message queuing program, (per pending Claim 22), or a database program, (per pending Claim 23), as queuing is taught by Wipfel and a multitude of disparate resources are obviously and generally managed using a database. Thus, Claims 22 & 23 are unpatentable in view of the combined teachings of Wipfel in view of VanDervort.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US Patent US 6,353,898 B1 to Wipfel;

US Patent 5,826,270 to Rutkowski; and

US Patent US 6,349,097 B1 to Smith.

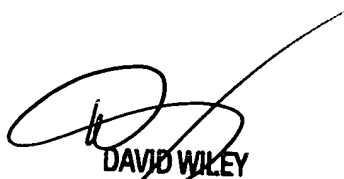
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arrienne M. Lezak whose telephone number is (703)-305-0717. The examiner can normally be reached on M-F 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (703)-308-5221. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Arrienne M. Lezak
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